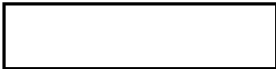


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STAT

MOTORIZED

FILM TRANSPORT FOR

MIM #4 LIGHT TABLE

OPERATING

INSTRUCTIONS

Declass Review by NGA.

FEATURES

STAT

The Motorized Film Transport will accommodate roll film in any width from 70mm to 9 $\frac{1}{2}$ -inches and any length up to 1000 ft.

The film may be stopped under a light tension or transported in either direction from a very slow scanning speed to a very fast slewing speed.

Two separate rolls of film may be viewed at one time with completely independent transport control of each roll.

The operator may manually override the motorized transport at any time and may stop the film, change the speed or change the direction as he desires.

SECTION I SUMMARY

SECTION II CONTROLS AND CONNECTORS

SECTION III OPERATING PROCEDURE

SECTION I

SUMMARY

1. Using an empty spool, adjust the position of the film drives and center posts for the width of film being used. The drives will accommodate up to 1000 ft. rolls of any width between 70mm and 9 $\frac{1}{2}$ -inches.

2. The "DUAL" mode of operation permits simultaneous viewing of two parallel rolls of film of any width from 70mm to 5-inches or single rolls up to 9 $\frac{1}{2}$ -inches wide. Place the coupled pairs of switches on both the left hand and right hand junction boxes in the "DUAL ON" position.

The left hand controller controls the front roll of film and the right hand controller controls the rear roll of film.

3. The "SPLIT" mode of operation permits simultaneous viewing of a roll of film on the left hand viewing stage and another roll of film on the right hand viewing stage. The film may be of any width from 70mm to 9 $\frac{1}{2}$ -inches. Place the coupled pairs of switches on both the left hand and the right hand junction boxes in the "SPLIT ON" position.

The left hand controller controls the left hand roll of film and the right hand controller controls the right hand roll of film.

4. Operate:

With all switches off, connect the power cord on the left hand junction box to a 115v, 60 cycle, single phase electrical power receptacle such as is provided by any ordinary wall outlet. Two 6 $\frac{1}{4}$ -amp fuses are provided on the left hand junction box to protect both sides of the line.

Place the "POWER ON" switch on the left hand junction box in the ON position (i. e. depress the upper rocker arm). Insert film spools, thread the film and check that the position of the reversing torque switches on each film drive are correct for the direction of wrap of film on each spool. Place the control knobs on the motor controllers in the neutral position.

Place the "MOTOR ON" switches on each controller in the ON position (i. e. depress the rocker arm adjacent to the word ON).

Use the control knobs on the controllers to transport film in the desired direction at the desired speed.

SECTION II

CONTROLS AND CONNECTORS

1. Left Hand Junction Box
 - 1.1 "POWER ON": The Master Power On-Off Switch for the Motorized Film Drive.
 - 1.2 Power Cord: A separate electrical cord is provided for the film drive power. Power is 115VAC, 60 Cycle, single phase.
 - 1.3 Fuze Holders and Fuzes: Both sides of the main power input line are independently protected with $6\frac{1}{4}$ -amp, 115 volt fuzes.
 - 1.4 "DUAL ON" "SPLIT ON": A coupled switch pair which determines the operating mode of the film drive. The switches on the left hand and right hand junction boxes must be in the same position for proper functioning of the drive.
 - 1.5 "J-1 FRONT": Electrical power receptacle for the left hand front motor.
 - 1.6 "J-3 REAR": Electrical power receptacle for the left hand rear motor or the left hand lower motor.


2. Right Hand Junction Box

- 2.1 "DUAL ON"; "SPLIT ON": The coupled switch pair, companion to the pair on the left hand junction box, which determine the operating mode of the film drive.
- 2.2 "J-2 FRONT": Electrical power receptacle for the right hand front motor.
- 2.3 "J-4 REAR": Electrical power receptacle for the right hand rear or right hand lower motor.

3. Motor Controllers

- 3.1 The left hand controller controls one pair of motors, and the right hand controller controls the other pair of motors. When all the mode switches on both junction boxes (see paragraphs 1.4 and 2.1) are in the "DUAL ON" position, the left hand controller controls the two front motors and the right hand controller controls the two rear motors.

Both front motors always stay in the upper location regardless of mode switch position. The rear motors, however, must be removed and installed in the lower position for "SPLIT" operation. With the rear motors installed on the lower mounting brackets and all the mode switches on both junction boxes in the "SPLIT ON" position, the left hand controller controls the left hand pair of motors and the right hand controller controls the right hand pair of motors.

- 3.2 "MOTOR ON" Switch: A switch which applies electrical power to the motors.
- 3.3 "HI TORQ" Switch: A pushbutton switch which provides a small boost in motor torque. The switch does not appreciably affect the maximum film slewing speed nor does it provide any advantage for slow speed scanning. The switch is provided for the convenience of the operator in pulling the last few feet of film off a 1000 ft. spool.
- 3.4 "  ": The motor control knob controls the electrical power applied to the motors. Rotating the knob counter-clockwise moves the film to the left across the viewing stage. Rotating the knob clockwise moves the film to the right across the viewing stage. The further the knob is rotated, the faster the film will move. When the knob is in the neutral position, the film will remain stationary on the viewing stage under a light tension.

4. Motor Drive Assemblies

- 4.1 On each motor drive assembly there is a reversing switch (red colored rocker switch). The switch determines the direction of rotation of the motor and thus permits the operator to determine separately for each spool the direction in which the film is wound onto the spool.

- 4.2 The film spool spindle on each motor drive assembly is retracted for insertion of the film spools by means of the manual knob. The spindle locks in both the IN position and the OUT position. The lock is released by depressing the small central locking button on the manual knob. To retract the spindle for insertion of a film spool, depress the locking button and pull on the manual knob. To lock the spindle in the OUT position, release the locking knob while the spindle and manual knob are held in the OUT position. To release the spindle to engage a spool, pull slightly on the manual knob to relieve the tension on the lock and depress the locking knob. Gently allow the spindle to move in to engage the spool. Release the locking knob and the spindle will lock in the IN position. The lock permits a small amount of travel of the spindle in order to accommodate variations in the width of spools of nominally the same size without resetting the mounting brackets.
- 4.3 Manual over-ride of the motor drive may be accomplished at any time by grasping the manual knobs on the front motor drives. Manual over-ride of the film speed and direction may be accomplished at any time with either hand without changing the controller setting. The lower knobs of the front motor drives provide manual control of the rear motor drives.

SECTION III

OPERATING PROCEDURE

1. Positioning for 9 $\frac{1}{2}$ -inch wide film

1.1 Front Motor Drive:

Release the clamping knob, relieve the weight of drive on the bracket slightly and slide the drive toward the front of the table until the bracket is against the stop on the track. Tighten the clamping knob. Both motor drives will be in proper alignment on the table when the brackets are against the stops.

1.2 Rear Motor Drive:

Release the clamping knob and move the drive to the rear of the table until it is out of the way of the center post. The sliding bracket will overhang the track slightly. Tighten the clamp knob.

1.3 Center Post:

Release the clamp knob and move the center post until the front edge (designated by an arrow) is in alignment with the scribed line on the track labeled "9.5". Tighten the clamp knob.

2. Positioning for 5-inch film

2.1 Front Motor Drive:

To accommodate two parallel rolls of 5-inch film (DUAL mode) it is necessary to remove the stop on the track and move the front motor toward the front of the table until the edge of the slide bracket is aligned with the front scribe mark on the track labeled "5".

2.2 Rear Motor Drive:

Position the rear motor drive so that the front edge of the slide bracket is aligned with the rear scribe mark on the track labeled "5". Clamp in place.

2.3 Center Post:

Position the center post so that the front edge of the slide bracket (marked with an arrow) is aligned with the middle scribed line on the track labeled "5".

2.4 For a single strip of 5-inch film, it is not necessary to remove the front stop from the track and the forward motor may be positioned against the stop. The center post must then be positioned an equivalent distance to the rear of the middle scribed line labeled "5".

3. Positioning for 70mm wide film

3.1 Front Motor Drive:

Position the front motor drive against the front stop and clamp in place.

3.2 Rear Motor Drive:

Position the rear motor drive to align the front edge of the slide bracket with the rear scribe mark on the track labeled "70". Clamp in place.

3.3 Center Post:

Position the center post to align the front edge of the slide bracket (marked with an arrow) with the front scribe mark on the track labeled "70".

4. "DUAL" Mode Operation

4.1 The "DUAL" mode of operation is used for one roll of 9½-inch film, one roll of 5-inch film, one roll of 70mm film, two parallel rolls of 5-inch film or two parallel rolls of 70mm film. Each roll of film must run across the table from the left hand drive assembly to the right hand drive assembly. Set the positions of the motor drive assembly for the film being used.

4.2 Switches and Cables:

Place the coupled pairs of switches on both junction boxes in the "DUAL ON" position. Connect the front motor drive assembly electrical cables to the "FRONT" receptacles on their respective junction boxes.

Connect the rear motor drive assembly electrical cables to the "REAR" receptacles on their respective junction boxes. With all switches off, connect the power cord on the left hand junction box to a 115 volt, 60 cycle, electrical power receptacle. Place the "POWER ON" switch on the left hand junction box in the ON position.

4.3 Operate:

Install supply and take-up film spools as desired on either the right hand or left hand side of the table. Thread film from take-up to supply spool and manually put a few wraps of film on the take-up spool. Inspect the reversing switches on each motor drive to insure that the switch position corresponds to the direction the film is wrapped on the spool. Place the control knobs of the controllers in the neutral position.

The left hand controller operates the front film drives and controls the front roll of film. Place the "MOTOR ON" switch of the left hand controller in the ON position. A light tension will be applied to the film and the film will remain stationary. When using a 1000 ft. roll of film, the film may move slowly onto the take-up reel. Adjust the control knob to oppose the motion until the film stops moving.

The right hand controller operates the rear film drives and controls the rear roll of film. Place the "MOTOR ON" switch of the right hand controller in the ON position. Observe the same procedures and precautions as for the front roll of film and the left hand controller.

5. "SPLIT" Mode Operation

- 5.1 The "SPLIT" mode of operation is used for one roll of film with both supply and take-up spools on the

left hand side of the table and one roll of film with both supply and take-up spools on the right hand side of the table. The film rolls may be of any width from $9\frac{1}{2}$ -inches to 70mm. Each roll of film runs from the upper film drive across the viewing stage and through the central slot to the lower film drive. Set the positions of the upper film drive assemblies for the size film being used.

5.2 Lower Film Drive Installation:

Disconnect the electrical cables of the rear film drives from the "REAR" receptacles of the junction boxes. Release the clamping knobs of the rear film drives and slide the drive assembly off the rear of the track and the manual control shaft. Caution must be used as clearances between Motor Drive Assembly, the junction box and the manual control shaft are close. The shaft, which provides manual control of the rear drive, remains assembled to the front motor drive.

Install the lower center post by sliding the slide bracket onto the lower track. Note that the support bearing is toward the front. Clamp in place, install the accessory slide bracket onto the motor drive housing with the four screws provided. It is not necessary to remove the existing slide bracket as the accessory bracket may be installed on the opposite side of the housing. Please note that the

clamp knob on the accessory bracket must be away from the motor. To install the rear motor drive assembly in the lower position, simply slide the accessory slide bracket onto the lower track and clamp in place. Note that the film spool must be inboard and the motor outboard. Either rear motor drive assembly may be used for either lower motor drive assembly. If, however, the left rear motor drive assembly is installed in the right lower motor position and vice versa for the other drive, then both the original slide bracket and the accessory slide bracket may remain assembled to the motor drive and neither need be removed. Align the lower drive assembly and center post with the upper drive assembly and center post for good tracking.

5.3 Switches and Cables:

Place the coupled pairs of switches on both junction boxes in the "SPLIT ON" position. Connect the front motor drive assembly electrical cables to the "FRONT" receptacles on their respective junction boxes. Connect the lower motor drive assembly electrical cables to the "REAR" receptacles on their respective junction boxes.

With all switches off, connect the power cord on the left hand junction box to a 115 volt, 60 cycle electrical power receptacle. Place the "POWER ON" switch on the left hand junction box in the ON position.

5.4 Operate:

Install supply and take-up spools as desired on the right hand and/or the left hand side of the table, thread film from the supply spool, across the viewing stage, through the central slot and onto the take-up spool. Manually put a few wraps of film on the take-up spool.

Inspect the reversing switches on each motor drive to insure that the switch position corresponds to the direction the film is wrapped on the spool. Place the control knobs of the controllers in the neutral position.

The left hand controller operates the left hand film drives and controls the left hand roll of film.

Place the "MOTOR ON" switch of the left hand controller in the ON position. A light tension will be applied to the film and the film will remain stationary. When using a 1000 ft. roll, the film may move slowly onto the take-up reel. Adjust the control knob to oppose the motion until the film stops moving. The right hand controller operates the right hand film drives and controls the right hand roll of film. Place the "MOTOR ON" switch of the right hand controller in the ON position. Observe the same procedures and precautions as for the left hand roll of film.